

Amendments to the claims

This listing of claims will replace all prior versions and listings of the claims.

Listing of Claims:

1- 29. (Canceled).

30. (Previously presented) A liquid stereolithography resin comprising a first urethane acrylate oligomer, a first acrylate monomer, a polymerization modifier, a second urethane acrylate oligomer different from the first urethane acrylate oligomer, and a stabilizer; wherein the first urethane acrylate oligomer is an aliphatic polyester urethane diacrylate oligomer, wherein the first acrylate monomer is ethoxylated (3) trimethylolpropane acrylate, and the polymerization modifier is selected from the group consisting of isobornyl acrylate, ethoxylated (5) pentaerythritol tetraacrylate, an aliphatic urethane acrylate, tris-(2-hydroxyethyl)isocyanurate triacrylate, and mixtures thereof, wherein the resin includes 5-35 weight % an aliphatic polyester urethane diacrylate oligomer and 0.5-25 weight % ethoxylated (3) trimethylolpropane acrylate, wherein the resin includes 15-45 weight % ethoxylated (5) pentaerythritol tetraacrylate.

31. (Previously presented) A liquid stereolithography resin comprising a first urethane acrylate oligomer, a first acrylate monomer, a polymerization modifier, a second urethane acrylate oligomer different from the first urethane acrylate oligomer, and a stabilizer; wherein the first urethane acrylate oligomer is an aliphatic polyester urethane diacrylate oligomer, wherein the first acrylate monomer is ethoxylated (3) trimethylolpropane acrylate, and the polymerization modifier is selected from the group consisting of isobornyl acrylate, ethoxylated (5) pentaerythritol tetraacrylate, an aliphatic urethane acrylate, tris-(2-hydroxyethyl)isocyanurate triacrylate, and mixtures thereof, wherein the resin includes 5-35 weight % an aliphatic polyester urethane diacrylate oligomer and 0.5-25 weight % ethoxylated

(3) trimethylolpropane acrylate, wherein the resin includes 0.5-25 weight % an aliphatic urethane acrylate.

32. (Previously presented) The liquid stereolithography resin of claim 30, wherein the resin includes 5-35 weight % tris-(2-hydroxyethyl)isocyanurate triacrylate.

33-36. (Canceled).

37. (Previously presented) The liquid stereolithography resin of claim 30, wherein the resin includes 5-35 weight % isobornyl acrylate.

38. (Canceled).

39. (Previously presented) The liquid stereolithography resin of claim 30, wherein the resin includes 10- 35 weight % an aliphatic polyester urethane diacrylate and 0.5-25 weight % isobornyl acrylate.

40. (Previously presented) The liquid stereolithography resin of claim 30, wherein the resin includes 6-35 weight % isobornyl acrylate.

41-42. (Canceled).

43. (Previously presented) The liquid stereolithography resin of claim 30, wherein the resin includes 50-80 weight % an aliphatic urethane containing bound silicone and 0.5-20 weight % isobornyl acrylate.

44-46. (Canceled).

47. (Previously presented) The liquid stereolithography resin of claim 30, wherein the resin includes 45-75 weight % an aromatic urethane acrylate oligomer and 10-70 weight % isobornyl acrylate.

48-50. (Canceled).

51. (Previously presented) The liquid stereolithography resin of claim 30, wherein the resin includes 10-40 weight % isobornyl acrylate.

52-68. (Canceled).

69. (Previously presented) The liquid stereolithography resin of claim 30, further comprising a photoinitiator.

70. (Previously presented) The liquid stereolithography resin of claim 69, wherein the photoinitiator includes a phosphine oxide, an alpha-hydroxyketone, and a benzophenone derivative.

71. (Previously presented) The liquid stereolithography resin of claim 69, wherein the photoinitiator includes a component selected from the group consisting of a benzophenone, a benzil dimethyl ketal, a 1-hydroxy-cyclohexylphenylketone, an isopropyl thioxanthone, an ethyl 4-(dimethylamino)benzoate, a blend of 2,4,6-trimethylbenzoyldiphenyl phosphine oxide, 2,4,6-trimethylbenzophenone, 4-methylbenzophenone, and oligo(2-hydroxy-2-methyl-1-(4-(1-methylvinyl)phenyl)propanone, a benzoin normal butyl ether, a blend of oligo(2-hydroxy-2-methyl-1-(4-(1-methylvinyl)phenyl) propanone) and poly(2-hydroxy-2-methyl-1-phenyl-1-propanone), tripropyleneglycol diacrylate, an oligo(2-hydroxy-2-methyl-1-(4-(1-methylvinyl)phenyl)propanone), a 2-hydroxy-2-methyl-1-phenyl-1-propanone, a poly(2-hydroxy-2-methyl-1-phenyl-1-propanone), a trimethylolpropane triacrylate, a mixture of 2,4,6-trimethylbenzophenone and 4-methylbenzophenone, a phosphine oxide, a 4-

methylbenzophenone, a trimethylbenzophenone, a methylbenzophenone, and a blend of 2,4,6-trimethylbenzoyl-diphenyl-phosphineoxide and hydroxy-2-methyl-1-phenyl-propan-1-one.

72. (Previously presented) The liquid stereolithography resin of claim 69, wherein the photoinitiator includes a component selected from the group consisting of 2,4,6-trimethylbenzoyl-diphenyl-phosphineoxide and hydroxy-2-methyl-1-phenyl-propan-1-one, a phosphine oxide, and a 2-hydroxy-2-methyl-1-phenyl-1-propanone, or mixtures thereof.

73. (Previously presented) The liquid stereolithography resin of claim 69, wherein the photoinitiator activates polymerization of an acrylate in a wavelength range of 240 nm to 250 nm, 360 nm to 380 nm, or 390 nm to 410 nm.

74-78. (Canceled).

79. (Previously presented) The liquid stereolithography resin of claim 30, wherein the stabilizer is selected from the group consisting of (bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate and 1-methyl-10-(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate), (bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate), MEQH (4-methoxyphenol), 2-(2'-hydroxy-5'-methylphenyl)benzotriazole, 1,2,2,6,6-pentamethyl-4-piperidyl methacrylate and (2-hydroxy-4-octyloxybenzophenone).

80. (Canceled).

81. (Previously presented) A liquid stereolithography resin comprising an aliphatic polyester urethane diacrylate oligomer, an ethoxylated (3) trimethylolpropane acrylate, and a polymerization modifier comprising a member selected from the group consisting of isobornyl acrylate, ethoxylated (5) pentaerythritol tetraacrylate, an aliphatic urethane acrylate, tris-(2-hydroxyethyl)isocyanurate triacrylate, and mixtures thereof, wherein the resin includes 15-45 weight % ethoxylated (5) pentaerythritol tetraacrylate.

82. (Previously presented) A liquid stereolithography resin comprising an aliphatic polyester urethane diacrylate oligomer, an ethoxylated (3) trimethylolpropane acrylate, and a polymerization modifier comprising a member selected from the group consisting of isobornyl acrylate, ethoxylated (5) pentaerythritol tetraacrylate, an aliphatic urethane acrylate, tris-(2-hydroxyethyl)isocyanurate triacrylate, and mixtures thereof, wherein the resin includes 0.5-25 weight % an aliphatic urethane acrylate.

83. (Canceled).

84. (Previously presented) The liquid stereolithography resin of claim 31, wherein the resin includes 5-35 weight % tris-(2-hydroxyethyl)isocyanurate triacrylate.

85. (Canceled).

86. (Previously presented) The liquid stereolithography resin of claim 31, wherein the resin includes 5-35 weight % isobornyl acrylate.

87. (Canceled).

88. (Previously presented) The liquid stereolithography resin of claim 31, wherein the resin includes 10- 35 weight % an aliphatic polyester urethane diacrylate and 0.5-25 weight % isobornyl acrylate.

89. (Previously presented) The liquid stereolithography resin of claim 31, wherein the resin includes 6-35 weight % isobornyl acrylate.

90. (Canceled).

91. (Previously presented) The liquid stereolithography resin of claim 31, wherein the resin includes 50-80 weight % an aliphatic urethane containing bound silicone and 0.5-20 weight % isobornyl acrylate.

92. (Canceled).

93. (Previously presented) The liquid stereolithography resin of claim 31, wherein the resin includes 45-75 weight % an aromatic urethane acrylate oligomer and 10-70 weight % isobornyl acrylate.

94. (Previously presented) The liquid stereolithography resin of claim 31, wherein the resin includes 10-40 weight % isobornyl acrylate.

95-96. (Canceled).

97. (Previously presented) The liquid stereolithography resin of claim 31, further comprising a photoinitiator.

98. (Previously presented) The liquid stereolithography resin of claim 97, wherein the photoinitiator includes a phosphine oxide, an alpha-hydroxyketone, and a benzophenone derivative.

99. (Previously presented) The liquid stereolithography resin of claim 97, wherein the photoinitiator includes a component selected from the group consisting of a benzophenone, a benzil dimethyl ketal, a 1-hydroxy-cyclohexylphenylketone, an isopropyl thioxanthone, an ethyl 4-(dimethylamino)benzoate, a blend of 2,4,6-trimethylbenzoyldiphenyl phosphine oxide, 2,4,6-trimethylbenzophenone, 4-methylbenzophenone, and oligo(2-hydroxy-2-methyl-1-(4-(1-methylvinyl)phenyl)propanone, a benzoin normal butyl ether, a blend of oligo(2-hydroxy-2-methyl-1-(4-(1-methylvinyl)phenyl) propanone) and poly(2-hydroxy-2-methyl-1-phenyl-1-propanone), tripropyleneglycol diacrylate, an oligo(2-hydroxy-2-methyl-1-(4-(1-

methylvinyl)phenyl)propanone), a 2-hydroxy-2-methyl-1-phenyl-1-propanone, a poly(2-hydroxy-2-methyl-1-phenyl-1-propanone), a trimethylolpropane triacrylate, a mixture of 2,4,6-trimethylbenzophenone and 4-methylbenzophenone, a phosphine oxide, a 4-methylbenzophenone, a trimethylbenzophenone, a methylbenzophenone, and a blend of 2,4,6-trimethylbenzoyl-diphenyl-phosphineoxide and hydroxy-2-methyl-1-phenyl-propan-1-one.

100. (Previously presented) The liquid stereolithography resin of claim 97, wherein the photoinitiator includes a component selected from the group consisting of 2,4,6-trimethylbenzoyl-diphenyl-phosphineoxide and hydroxy-2-methyl-1-phenyl-propan-1-one, a phosphine oxide, and a 2-hydroxy-2-methyl-1-phenyl-1-propanone, or mixtures thereof.

101. (Previously presented) The liquid stereolithography resin of claim 97, wherein the photoinitiator activates polymerization of an acrylate in a wavelength range of 240 nm to 250 nm, 360 nm to 380 nm, or 390 nm to 410 nm.

102. (Previously presented) The liquid stereolithography resin of claim 31, wherein the stabilizer is selected from the group consisting of (bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate and 1-methyl-10-(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate), (bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate), MEQH (4-methoxyphenol), 2-(2'-hydroxy-5'-methylphenyl)benzotriazole, 1,2,2,6,6-pentamethyl-4-piperidyl methacrylate and (2-hydroxy-4-octyloxybenzophenone).